

VULTURE  
Questions and Answers  
Dated June 18<sup>th</sup>, 2007

Please submit VULTURE program related questions to  
[BAA07-51@darpa.mil](mailto:BAA07-51@darpa.mil)

**Mission and Technical Requirements:**

1. The two basic requirements of 1000 lbs p/l and 5 yr time on station with 99% reliability does not seem to preclude an approach with a “tag team” of UAV’s each carrying identical sensors armament, etc... that simply relieve each other at sufficiently frequent intervals to guarantee the reliability requirement is it the intention of the VULTURE program to allow such a solution?

Answer: A requirement of the program is a system that will use only one payload. This constraint precludes this “tag-team” approach. This suggested solution is exactly how such a mission would be approached now. The intent of the program is to change the way we think of aircraft operations.

2. What are the bounds of potential target areas and how far would a target area be from support bases?

Answer: The answers to this question will be based on the military utility study and ConOps developed under the program. But clearly a benefit of a long endurance aircraft is the ability to operate far from support bases.

3. Will low TRL technology be looked down upon during evaluation?

Answer: The offeror must determine through an examination of risk, schedule, cost and performance the appropriate TRL level in which to bid. It should be reiterated that a main purpose of the Phase I effort would be to fully examine those criteria and produce a plan for mitigating them during the Phase II. The offeror will define during any potential Phase I effort the schedule and cost necessary to reduce the risk and achieve the needed performance as defined by their Conceptual Design. Clearly, technologies that allow a closed design but which are less costly, less risky, and can be developed more quickly are preferable. However, the primary requirement would be a closed system design. If it is the offeror’s opinion that a low TRL technology is necessary to close the design, then the offeror should propose that technology. The selection criteria would include, but not exclusively, the ability to achieve a closed design, the risk of development, and the cost of development. The offerors should also be reminded that the notional schedule presented at Industry Day does not have to be held to.

Potential offerors should propose the cost and schedule necessary to successfully reduce the risk of their concept.

4. Will a threat analysis be required? Do I need to worry about survivability and vulnerability?

Answer: Indirectly it will be part of your military utility assessment for your configuration. However, survivability in and of itself is not a primary goal of this program.

5. Will this aircraft have to be designed to operate with manned aircraft scenarios?

Answer: For the demonstration, any developmental aircraft will be tested only in restricted airspace. For the operational system in the future, it will have to operate in manned airspace and with manned aircrafts.

6. What are the requirements for the method of launch and recovery?

Answer: The launch method is to be chosen by the offeror and will depend on the concept proposed. This might be runway-launched, balloon-deployed, or some other manner, depending on the architecture selected.

### **Payload:**

1. Does the Government have a specific payload already determined?

Answer: No specific payload has been selected. The vision of the program is to develop a 'BUS' that can provide the high level requirements stated in the BAA. Possible payload should be determined during the military utility analysis requested in the Phase I. One payload or a mix of payloads may be considered as long as the total equals or exceeds the 1000 lb., 5 kW requirement. Developmental payloads, as long as they are being actively funded in another program, may also be considered.

2. Is the payload Government Furnished Equipment and have 5 year reliability in Phase III flight test?

Answer: The offerors should assume that the payload is 100% reliable for the purposes of this program. The offerors can also assume that the payload will be GFE or a dummy weight and resistor.

3. Does the 1000lb allocation include the C2 and data link requirements for the payload?

Answer: Yes, part of the 1000 lbs. and 5 kW can be used for the necessary C2 and data link requirements.

4. Is 5KW power requirement for a continuous duty cycle?

Answer: The 5 kW is the average power requirement. How this breaks out between continuous power requirements and intermittent power will depend on the payloads selected during the military utility analysis and available technology design space.

**Proposal:**

1. Will the Government entertain multiple bids from one company?

Answer: Yes. However, since the Government is requesting that a Point-of-Departure concept be proposed, we can only accept one concept per Proposal. A company may propose any number of concepts, but there must be only one concept per Proposal.

2. What is the fidelity expectation of the phase II and III cost?

Answer: At the time of the initial bid, Phase I is expected to be costed at WBS level 4, while Phase II and III at WBS level 2. Please reference the definition of WBS levels in BAA 07-51. The updated proposal expected at the conclusion of the base Phase I will increase the fidelity of the costing for Phase II and III to WBS 4 and 3 respectively.

3. Will the Government entertain subsystem development proposals or only full system solutions proposals?

Answer: The Government is looking for full system solutions.

4. Will the Government entertain FFRDCs teaming with contractor?

Answer: Barring any exclusions from the FFRDCs charter, applicable laws or regulations, DARPA would allow teaming between contractors and an FFRDC. As the charter for each FFRDC is different the best source for an answer would be the specific FFRDC with whom you are intending to team. The prime and/or FFRDC must provide documentation that 1) the FFRDC's sponsoring agreement and applicable regulations allow its participation; 2) the FFRDC has unique capacity to do the work; 3) the work isn't otherwise available in the private sector; and 4) the FFRDC is not directly competing with industry. Citing FAR exceptions or other regulations allowing its response to the solicitation would be ideal. Note the prime is responsible to pay the FFRDC as a sub and DARPA will not fund the FFRDC directly.

5. Can government labs propose as prime contractors?

Answer: Typically government labs do not act as prime contractors for government efforts through a traditional contractual relationship with another government entity; however, each lab has its own charter and would need to determine if they can propose as a prime. The lab must provide documentation that 1) applicable regulations allow its participation; 2) it has a unique capacity to do the work; 3) the work isn't otherwise available in the private sector; and 4) the lab is not directly competing with industry. Citing FAR exceptions or other regulations allowing its response to the solicitation would be ideal.

**Programmatic:**

1. There seemed to be an implication that some seedlings were worked prior to this BAA. If so, can you point us to the companies who worked the problems?

Answer: Studies directly supporting the VULTURE concept were performed by the Government's SETA support team.

2. Draper Laboratory provides fault tolerant computing and GNC for space, land underwater and air systems. Being a non profit government agent, we sometimes work directly for the government to provide common system architecture for multiple h/w vendor solutions. This gives multiple sources for price competitions. Is this an option?

Answer: See the answer to #4 in Proposal section above.

3. What are the durations of each of the 3 phases, also what is the funding allocation and number of awards for Phase 1?

Answer: Please see Industry Day brief on <http://www.darpa.mil/tto/solicitations.htm>. The Phase I effort is a 9 month base with a 3 month option. All other phase durations are at the discretion of the offeror. Funding allocation is dependent of the quality of the proposals and its individual program execution plan. No budgetary guidelines are set. The government may award none, some or all of the proposed efforts.

4. Will other agencies populate the source selection evaluation board?

Answer: The SSEB may include employees from other government agencies.

5. Will the government entertain fixed price and cost plus contracts?

Answer: Yes

**Buoyant Flight:**

1. With reference to the heavier than air aircraft configuration desired, what is the government position with respect to Hybrid aircrafts that use both aerodynamic and buoyancy for lift?

Answer: No hybrid configuration is desired. However, the use of a balloon or other lighter-than-air device for initial launch of the system will be entertained.

2. Is there a preference between lighter-than-air and heavier-than-air aircraft architecture?

Answer: The Government is only entertaining heavier-than-air configurations.